

# CARPAL TUNNEL RELEASE



Relieving Pressure in Your Wrist

# What Is Carpal Tunnel Syndrome?

Carpal tunnel syndrome (CTS) is a condition that affects nerves in the wrist and hand. CTS causes tingling and numbness that can make even simple tasks hard to do. The good news: It can be treated to control symptoms. Talk to your doctor about your options. Also read this booklet to learn more.

## Symptoms of CTS

Symptoms may include tingling, numbness, weakness, or pain in the hand and wrist. At first, symptoms may occur mainly at night. Later, you may start noticing them during your daily routine. Symptoms often come and go, and can get worse over time.

## Working with Your Doctor

Talk to your doctor about options for treating your CTS. These may include medications, injections, or a splint. Surgery (called **carpal tunnel release**) may also be an option. Be sure to understand the benefits and risks of these treatments for you. Also be sure to get your questions answered.

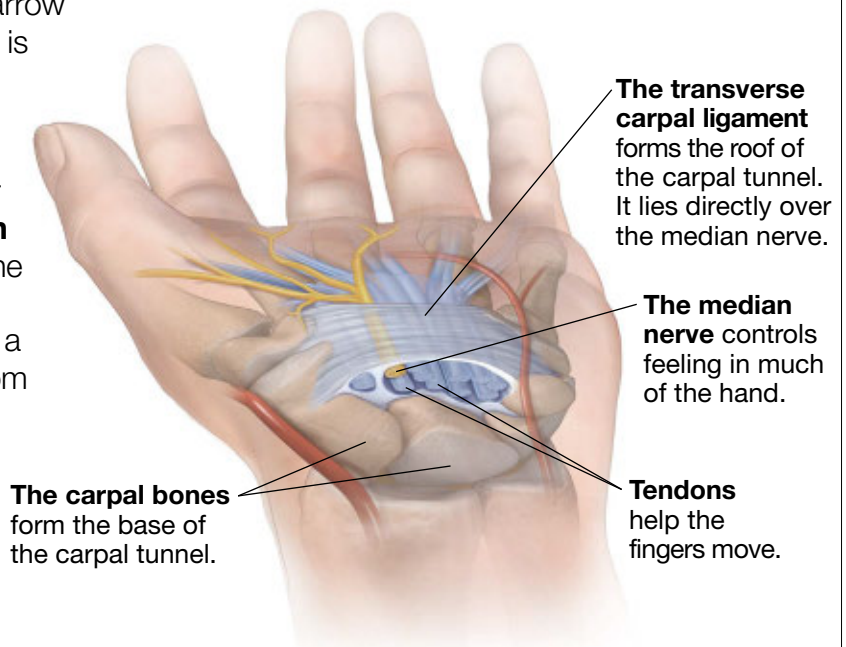


**Tendons** connect muscle to bone.  
**Ligaments** connect bone to bone.



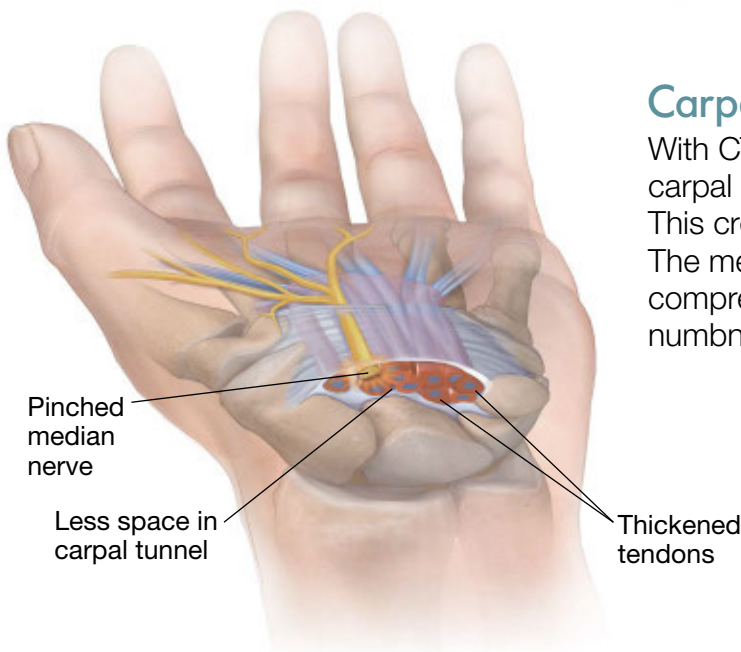
## A Normal Carpal Tunnel

The carpal tunnel is a narrow space inside the wrist. It is ringed by the carpal bones of the wrist and the overlying transverse carpal ligament. A major nerve called the **median nerve** passes through the carpal tunnel from the forearm into the hand. In a healthy wrist, there is room for the median nerve to pass through without being squeezed.



## Carpal Tunnel Syndrome

With CTS, the tendons in the carpal tunnel swell and thicken. This crowds the median nerve. The median nerve may be compressed or pinched, causing numbness, tingling, and pain.



# Your Evaluation

**Your doctor will examine your hand and wrist. You may also have certain tests. These help determine whether you have CTS or another problem. They also help plan your treatment.**

## Your Examination

Tell the doctor about your symptoms, including when you notice them most and what makes them better or worse. Your doctor will examine your hand and wrist. He or she may move your hand and wrist into certain positions or press or tap certain parts of your palm to check for symptoms.

## Tests You May Have

Your doctor may order tests to help diagnose CTS and rule out problems that cause similar symptoms.



## Electromyogram (EMG) and Nerve Conduction Study (NCS)

These tests measure nerve and muscle function. EMG measures the electrical activity of your muscles. NCS measures how electrical impulses travel along the nerve.

## Imaging Tests

Tests that create images of the bones and tissues of the wrist and hand may be done. These include X-ray and MRI. These tests can help rule out problems that may cause wrist and hand symptoms.

# Medical Treatment of CTS

**Medical treatments for CTS can help relieve symptoms without surgery. These treat inflammation and help prevent irritation of the median nerve. Follow the instructions your doctor gives you for each treatment.**

## Splinting

Your doctor may recommend wearing a splint (brace) on your wrist and hand just at bedtime, or also during the day. A splint works by keeping the wrist in a neutral (straight) position. This prevents the type of movement that may cause the carpal tunnel to narrow and lead to symptoms. Be sure to use a splint that has been approved by your doctor.



## Medications

Medications can help reduce pain and swelling. They may be over-the-counter or prescription. Take any medication exactly as your doctor has instructed. Because medications don't treat the causes of CTS, other treatments may be needed in the future.

## Cortisone Injections

Cortisone is a medication that helps reduce inflammation. It is injected into the wrist. It may cause soreness for the first 24 to 48 hours. Then, it usually reduces or relieves CTS symptoms for several weeks. Cortisone injections may be used to help diagnose CTS. If the injection relieves the pain, it confirms that CTS is present.

# Surgery for CTS

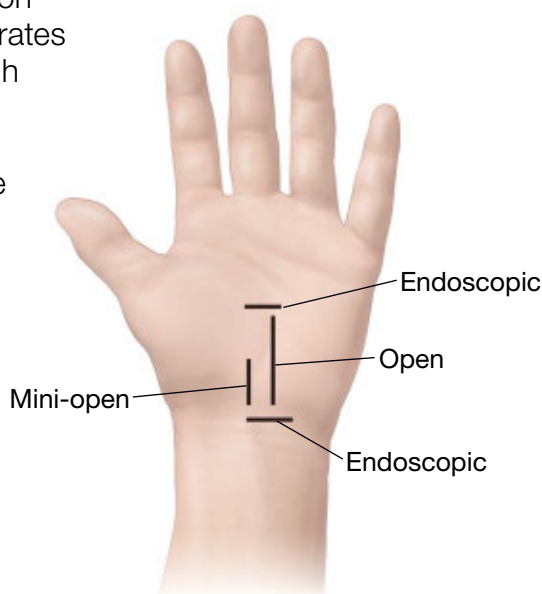
If no other treatment brings relief, surgery may be recommended. The goal of surgery is to relieve pressure on your median nerve and reduce pain and numbness. To do this, the transverse carpal ligament is cut (released). Your surgeon will explain how the release will be done. Just before surgery, you will be given anesthesia to prevent pain during surgery.

## Open Surgery

Open surgery is done through one incision in the palm. The surgeon views and operates on the transverse carpal ligament through the incision. Two types of open surgery incisions are done: open and mini-open. Your surgeon will tell you more about the one that will be used.

## Endoscopic Surgery

Endoscopic surgery is done using a magnifying tool called an **endoscope**. This tool contains a very small camera. One or two small incisions are made in the palm. The endoscope and surgical tools are inserted through the incision or incisions. Live video from inside the hand is sent to a monitor. This video guides the surgeon during the procedure.



Some possible incision sites for carpal tunnel surgery.

## Risks and Complications

*Risks of carpal tunnel release are rare. They include:*

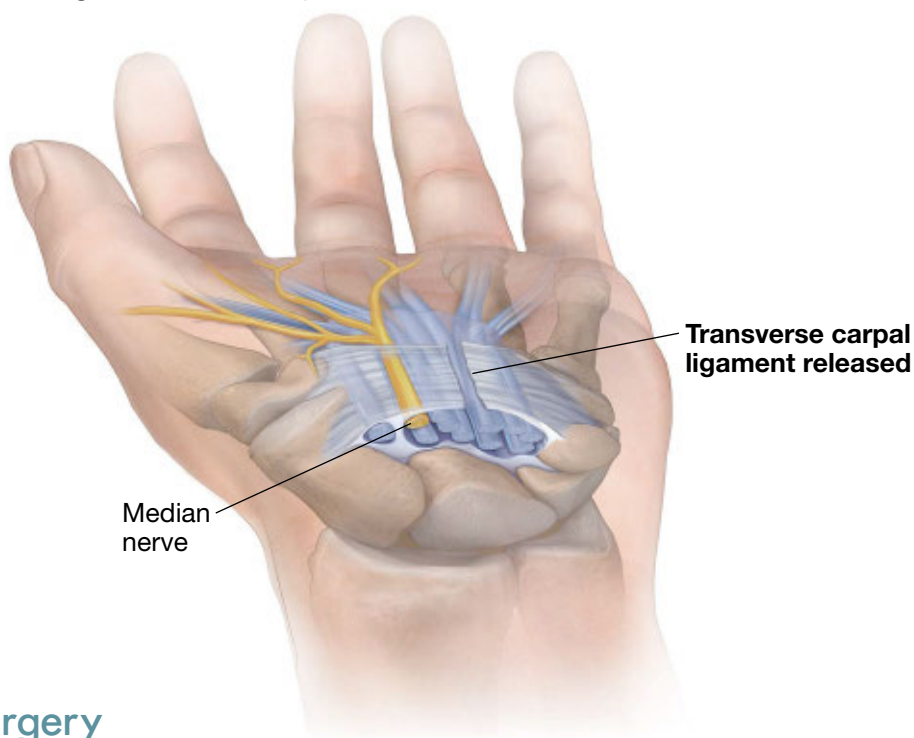
- Infection or bleeding
- Problems healing
- Painful scarring
- Incomplete release of the ligament
- Injury to nerves or a blood vessel
- Failure of CTS symptoms to improve





## During Surgery

The surgeon reaches the transverse carpal ligament using one of the methods described on page 6. The ligament is then released (cut). This makes the carpal tunnel larger and relieves pressure on the median nerve.



## After Surgery

After surgery, you will recover for a short time, then go home. Have an adult family member or friend drive you. At home, follow all the instructions you are given for taking care of your hand. It is normal to have some numbness and tingling in the fingers and tenderness in the hand for a time as the nerve recovers.

## When to Call Your Surgeon

*Call your surgeon if you notice any of these after surgery:*

- White or pale blue hand, fingers, or nails
- Pain not relieved by prescribed medication
- Loss of feeling in the hand or fingers
- Large amounts of swelling in the hand or fingers
- Fever of 100.4°F (38°C) or higher



# Work with Your Surgeon

Carpal tunnel release offers many benefits. But the decision to have surgery is up to you. Before you decide, be clear what results you can expect and what surgery can and can't do for you. Work with your surgeon to have all your questions answered before moving forward.

## Your Surgery Checklist

Use this checklist to remind you what to do before and after surgery. Ask your surgeon or nurse if you have questions about your recovery.

Before Surgery	After Surgery
<div><input type="checkbox"/> Tell your surgeon what prescription and over-the-counter medications, supplements, or herbal remedies you take. Ask if you should stop taking any of them before surgery.</div> <div><input type="checkbox"/> Arrange for an adult family member or friend to give you a ride to and from surgery.</div> <div><input type="checkbox"/> Don't eat or drink anything for as long as instructed before surgery.</div> <div><input type="checkbox"/> If you smoke, talk to your doctor.</div> <div><input type="checkbox"/> On the day of surgery, leave all rings, watches, and other jewelry at home.</div>	<div><input type="checkbox"/> Keep your hand raised above heart level. Use cold packs as instructed to reduce swelling and pain.</div> <div><input type="checkbox"/> Care for your incisions as directed.</div> <div><input type="checkbox"/> See your surgeon for scheduled follow-up visits.</div> <div><input type="checkbox"/> Move your fingers and do hand and wrist exercises as directed.</div> <div><input type="checkbox"/> Limit heavy use of your hand while it heals.</div>

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